

Patent

Attorney Docket No.: 12553/29

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS : Xm WONG et al.
SERIAL NO. : 09/741,684
FILED : December 18, 2000
FOR : BONDING PAD OF SUSPENSION CIRCUIT
GROUP ART UNIT : 2627
EXAMINER : Brian E. MILLER

M/S: APPEAL BRIEF – PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

ATTENTION: Board of Patent Appeals and Interferences

APPEAL BRIEF

Dear Sir:

This brief is in furtherance of the Notice of Appeal, filed in this case on June 23, 2009.

1. REAL PARTY IN INTEREST

The real party in interest in this matter is SAE Magnetics (H.K.) Ltd. (Recorded April 16, 2001; Reel/Frame 011915 / 0933).

2. RELATED APPEALS AND INTERFERENCES

An Appeal Brief was filed in this case on June 15, 2004 and March 14, 2007.

3. STATUS OF THE CLAIMS

Claims 19-24 are pending, rejected and on appeal in the application. Claims 1-18 were previously cancelled. No claims are objected to, allowed, or withdrawn, and no Amendments to the claims were made after the Final Office Action dated March 23, 2009.

The claims in their current form (including those claims under appeal) are presented in The Appendix – Section 8 – Claims on Appeal.

4. STATUS OF AMENDMENTS

The claims listed on page A-1 of the Appendix attached to this Appeal Brief reflects the present status of the claims.

5. SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention generally relates to a circuit bonding pad for a magnetic recording head of a disk drive, and more specifically, to a circuit and suspension assembly for a disk drive magnetic head assembly.

The embodiment of independent claim 19 generally describes a suspension comprising a suspension bonding pad (*see e.g.*, page 3, line 28 – Figure 3) for electrically bonding a magnetic head terminal (*see e.g.*, page 2, line 30-32 – Figure 3), wherein said bonding pad includes a metal pad having a bonding substance applied as a surface finishing material (*see e.g.*, page 4, line 2-4 – Figure 3), the surface finishing material being heat treated prior to bonding to a surface (*see e.g.*, page 4, line 5-7 – Figure 3); and a slider bonding pad initially without bonding substance coupled to said suspension such that the bonding substance on said suspension bonding pad is reflowed so as to electrically couple the suspension bonding pad and the slider bonding pad (*see e.g.*, page 2, line 36-37 – Figure 3), wherein the slider bonding pad enables the reuse of the suspension by removing the connection between a slider and the slider bonding pad with heat treatment (*see e.g.*, page 3, line 4-6 – Figure 3).

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

- A.** Do claims 19-24 fail to comply with the written description requirement under 35 U.S.C. § 112, first paragraph?
- B.** Are claims 19-24 indefinite under 35 U.S.C. §112, second paragraph?
- C.** Are claims 19-23 anticipated under 35 U.S.C. § 102(b) anticipated by Albrecht, US Pat. No. 5,821,494 (hereinafter “Albrecht”)?
- D.** Is claim 24 rendered obvious under 35 U.S.C. §103(a) over either Albrecht or Ainslie, US Pat. No. 4,761,699 (hereinafter “Ainslie”)?

7. ARGUMENT

- A.** Claims 19-24 do not fail to comply with the written description requirement.

With regard to the 35 U.S.C. § 112, first paragraph rejections of claim 19, Applicants submit that the Figures (*e.g.*, Figure 1) and its related description clearly describe an embodiment including, among other things, traces that extend along the lateral edges of the slider. Applicants submit that the relevant limitations are sufficiently described in the specification and are not indefinite. The § 112 rejections should be.

- B.** Claims 19-24 are not indefinite under 35 U.S.C. §112, second paragraph.

Also, With regard to the 35 U.S.C. §112, second paragraph rejection of claim 19, the Examiner asserts it is not readily apparent what structure of the slider bonding pad permits re-use. *See* Office Action dated 4/25/2006, paragraph 4. Applicants maintain this is an improper rejection, as it is readily apparent from both the claim and the specification it is not a structure of the bonding pad permitting such re-use, but rather the bonding pad itself (“...wherein the slider bonding pad enables the reuse of the suspension by removing the connection between a slider and the slider bonding pad with heat treatment”). *See* Specification page 3, lines 4-6.

- C.** Claims 19-23 rejected under 35 U.S.C. § 102(b) are not anticipated by Albrecht, US Pat. No. 5,821,494.

With regard to the 35 U.S.C. § 102 rejection of claim 19, the Examiner asserts Albrecht shows a plurality of traces 74A extending longitudinally along generally the center of the suspension, and around the outer edges of the slider 42 to the trailing edge of the slider, citing Figures 21A, 21B, 21C and column 9, lines 10-53. *See* Office Action dated 3/23/2009, paragraph 6. Applicants disagree.

First, with regard to the Figures, Applicants note none of the cited Figures teach or suggest the relevant limitations. In particular, in each of the cited embodiments, the trace connection 74a follows generally along the outside of the suspension – *away* from the lateral edges of the slider 42. Indeed, the traces are further extended away from the slider in that they are placed above the suspension post extensions that extend laterally away from the suspension body. *See e.g.*, Figure 21B. Therefore, none of the cited Figures teach or suggest an suspension embodiment wherein a plurality of traces extend longitudinally generally along the center of a suspension and extend along the lateral edges of a slider to a trailing edge of the slider (as described in claim 19). The cited section of the description describes the discussed Figure 21A-21C, and therefore fails to teach or suggest the relevant limitations for similar reasons.

D. Claim 24 rejected under 35 U.S.C. §103(a) is not unpatentable over either Albrecht, US Pat. No. 5,821,494 or Ainslie, US Pat. No. 4,761,699.

Ainslie fails to make up for the deficiencies of Albrecht. The Examiner asserts Ainslie shows a plurality of traces 52, 55, and 54 extending longitudinally along generally the center of the suspension 40, and underneath and around the outer edges of the slider 42 to the trailing edge of the slider 26. *See* Office Action dated 9/3/2008, paragraph 9. Applicants again disagree.

Cited element 55 is described as a “ground lead portion”. *See* column 2, line 39. Uncited elements 46 are described as “electrical leads”. *See* column 2, line 34. However, neither of these two elements of the Ainslie reference teach or suggest the relevant limitations. For example, as clearly shown in Figure 2 of the Ainslie reference, the “ground lead portion” 55 and the “electrical leads” 46 both extend perpendicularly to the longitudinal and underneath the center of the slider; they do not extend underneath and around the outer edges of the slider to the

trailing edge of the slider. *See also e.g.*, Figure 3. Cited elements 52, 54 are described as “large area portions”; they are not traces at all. *See* column 5, lines 51. Therefore, none of the cited elements teach or suggest the relevant limitations.

As the cited references Ainslie and Albrecht fail to teach or describe at least the above limitations, the current rejection of claim 19 is lacking and should be reversed. Applicants submit claim 19 is allowable, and claims 20-24 are allowable as depending from an allowable independent claim.

CONCLUSION

Appellants therefore respectfully request that the Board of Patent Appeals and Interferences reverse the Examiner’s decision rejecting claims 19-24 and direct the Examiner to pass the case to issue.

The Examiner is hereby authorized to charge any additional fees which may be necessary for consideration of this paper to Kenyon & Kenyon Deposit Account No. **11-0600**.

Respectfully submitted,

KENYON & KENYON LLP

Date: August 24, 2009

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APPENDIX

(Brief of Appellants Xm WONG al.
U.S. Patent Application Serial No. 09/741,684)

8. CLAIMS ON APPEAL

The claims in their current form (including those claims under appeal) are presented below:

1-18 (Cancelled)

19. (Previously Presented) A suspension comprising:

a suspension bonding pad for electrically bonding a magnetic head terminal, wherein said bonding pad includes a metal pad having a bonding substance applied as a surface finishing material, the surface finishing material being heat treated prior to bonding to a surface; and a slider bonding pad initially without bonding substance coupled to said suspension such that the bonding substance on said suspension bonding pad is reflowed so as to electrically couple the suspension bonding pad and the slider bonding pad, wherein the slider bonding pad enables the reuse of the suspension by removing the connection between a slider and the slider bonding pad with heat treatment, and further wherein a plurality of traces extend longitudinally generally along the center of a suspension and extend along the lateral edges of a slider to a trailing edge of the slider.

20. (Previously Presented) The suspension as claimed in claim 19, wherein said bonding substance is solder.

21. (Previously Presented) The suspension as claimed in claim 19, wherein said bonding substance is a conductive polymer.

22. (Previously Presented) The suspension as claimed in claim 19, wherein said bonding substance is an adhesive.

23. (Previously Presented) The suspension as claimed in claim 19, wherein said bonding substance is a film.

24. (Previously Presented) The suspension as claimed in claim 20, wherein a bump height for the solder is approximately 50-300 μm , and a bump diameter for the solder is less than 180 μm .

25-30 (Cancelled)

9. EVIDENCE APPENDIX

No further evidence has been submitted with this Appeal Brief.

10. RELATED PROCEEDINGS APPENDIX

Per Section 2 above, there are no related proceedings to the present Appeal.